



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,461	11/16/2001	Robert C. Meier	72255/13156	7556
23380	7590	04/21/2005	EXAMINER	
TUCKER, ELLIS & WEST LLP 1150 HUNTINGTON BUILDING 925 EUCLID AVENUE CLEVELAND, OH 44115-1475				NGUYEN, PHUONGCHAU BA
ART UNIT		PAPER NUMBER		
2665				

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/992,461	MEIER ET AL. <i>(initials)</i>
	<b>Examiner</b>	<b>Art Unit</b>
	Phuongchau Ba Nguyen	2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 16 November 2001.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-6,10,12-22,26 and 28-32 is/are rejected.
- 7) Claim(s) 7-9,11,23-25 and 27 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 16 November 2001 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:  
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-3, 5, 15-16, 17-19, 21, 31-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Davidson (6,754,197).

**Regarding claim 1:**

Davidson discloses Method and System for Transmit Data Blocking in a Wireless Communications Network.

*transmitting a plurality of data packets wherein at least a portion (packet 102 as a portion of) of the data packets (packets 102-114) have at least one predetermined identifier (destinations A, B, and C) (column 1, lines 41-43);*

*selecting the data packets (packets 104, 106, 114, 116 are inherently selected) having the predetermined identifier (the packets are inherently selected to have the same destination B) (column 1, lines 46-48); forwarding the selected data packets (the packets 104, 106, 114, 116 are forwarded) to at least one recipient (destination B) (column 1, lines 48-51).*

**Regarding claim 2:**

Davidson further discloses *wherein the step of transmitting comprises sending the data packets (packets 102-114) over a local area network (wireless LAN, column 4, lines 13-25) to an access point (320-fig.3), and wherein the step of forwarding comprises wireless transmission of the identified data packets (packets 102-114) from the access point (320-fig.3) to the recipient (destination A, B, or C)(column 2, lines 10-12; column 4, lines 13-32; column 5, lines 7-12).*

**Regarding claim 3:**

Davidson further discloses *wherein the step of selecting comprises comparing (determining) the data packets with a membership table (status table) for selecting each predetermined identifier respectively associated with each of the at least one recipients (particular destination) (column 2, lines 42-46) and discarding data packets not having a predetermined identifier included in the membership table, so as to give priority to identified data packets (packet filtering mechanism corresponding to the discarding function to prevent sending out-of-order packets, by filtering the out-of-order packets,*

the packet filtering mechanism discarding unwanted packets that are not listed to be sent into the network, see column 5, lines 33-48).

**Regarding claim 5:**

Davidson further discloses *wherein the membership table is maintained on a wireless access point for forwarding the identified data packets to the at least one recipient* (column 6, lines 53-55).

**Regarding claim 15 :**

Davidson further discloses that a data packet intended for a particular receiver address maybe queued at a time from a particular source address, see column 1, lines 34-40 (corresponding to *wherein the predetermined identifier is correlated with the source of the data packet*).

**Regarding claim 16:**

Davidson further discloses that a data packet intended for a particular receiver address maybe queued at a time from a particular source address, see column 1, lines 34-40 (corresponding to *wherein the predetermined identifier is correlated with the destination of the data packet*).

**Regarding claim 17:**

Davidson discloses Method and System for Transmit Data Blocking in a Wireless Communications Network.

*Means for transmitting a plurality of data packets wherein at least a portion (packet 102 as a portion of) of the data packets (packets 102-114) have at least one predetermined identifier (destinations A, B, and C) (column 1, lines 41-43);*

*Means for selecting the data packets (packets 104, 106, 114, 116 are inherently selected) having the predetermined identifier (the packets are inherently selected to have the same destination B) (column 1, lines 46-48);*

*Means for forwarding the selected data packets (the packets 104, 106, 114, 116 are forwarded) to at least one recipient (destination B) (column 1, lines 48-51).*

**Regarding claim 18:**

Davidson further discloses *wherein the means for transmitting comprises sending the data packets (packets 102-114) over a local area network (wireless LAN, column 4, lines 13-25) to an access point (320-fig.3), and wherein the means for forwarding comprises wireless transmission of the identified data packets (packets 102-114) from the access point (320-fig.3) to the recipient (destination A, B, or C)(column 2, lines 10-12; column 4, lines 13-32; column 5, lines 7-12).*

**Regarding claim 19:**

Davidson further discloses *wherein the means for selecting comprises means for comparing (determining) the data packets with a membership table (status table) for selecting each predetermined identifier respectively associated with each of the at least one recipients (particular destination) (column 2, lines 42-46) and means for discarding data packets not having a predetermined identifier included in the membership table, so as to give priority to identified data packets (packet filtering mechanism corresponding to the discarding function to prevent sending out-of-order packets, by filtering the out-of-order packets, the packet filtering mechanism discarding unwanted packets that are not listed to be sent into the network, see column 5, lines 33-48).*

**Regarding claim 21:**

Davidson further discloses *wherein the membership table is maintained on a wireless access point for forwarding the identified data packets to the at least one recipient (column 6, lines 53-55).*

**Regarding claim 31:**

Davidson further discloses that a data packet intended for a particular receiver address maybe queued at a time from a particular source address, see column 1, lines 34-40 (corresponding to *wherein the predetermined identifier is correlated with the source of the data packet*).

**Regarding claim 32:**

Davidson further discloses that a data packet intended for a particular receiver address maybe queued at a time from a particular source address, see column 1, lines 34-40 (corresponding to *wherein the predetermined identifier is correlated with the destination of the data packet*).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 4, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson (6,754,197) in view of Hendel (5,920,566).

**Regarding claim 4:**

Davidson discloses all the claimed limitations, except (1) *wherein the membership table selects identified data packets that are multicast destination packets, each having a multicast destination address under at least one of IEEE 802 and Class D IP protocols.*

Hendel (5,920,566) discloses Routing in a Multi-layer Distributed Network Element. In Hendel, a subsystem is configured to identify multicast packets for multicast routing purposes by checking the class of the packet header and the multicast group destination address of the packet header, see column 11, lines 35-42. In other words, Hendel's teaching is similar to that of multicast destination address under at least one of IEEE 802 and class D IP protocols (corresponding to (1)).

Davidson and Hendel are analogous art because they are from a similar problem solving area, viz., routing multicast packets.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the method and system for routing multicast packets of Hendel with Davidson.

The suggest/motivation for doing so would have been to provide the routing for the selected multicast packets, i.e. IGMP to increase variation in traffic distribution.

Therefore, it would have been obvious to combine Hendel with Davidson to obtain the invention as specified in claim 4.

**Regarding claim 20:**

Davidson discloses all the claimed limitations, except (1) *wherein the membership table selects identified data packets that are multicast destination packets, each having a multicast destination address under at least one of IEEE 802 and Class D IP protocols.*

Hendel (5,920,566) discloses Routing in a Multi-layer Distributed Network Element. In Hendel, a subsystem is configured to identify multicast packets for multicast routing purposes by checking the class of the packet header and the multicast group destination address of the packet header, see column 11, lines 35-42. In other words, Hendel's teaching is similar to that of multicast destination address under at least one of IEEE 802 and class D IP protocols (corresponding to (1)).

Davidson and Hendel are analogous art because they are from a similar problem solving area, viz., routing multicast packets.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the method and system for routing multicast packets of Hendel with Davidson.

The suggest/motivation for doing so would have been to provide the routing for the selected multicast packets, i.e. IGMP to increase variation in traffic distribution.

Therefore, it would have been obvious to combine Hendel with Davidson to obtain the invention as specified in claim 4.

Art Unit: 2665

6. Claims 6 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson (6,754,197) in view of Leung (6,195,705).

**Regarding claim 6:**

Davidson discloses all the claimed limitations, except (1) *the step of transferring membership table information from a first wireless access point to a second wireless access point when the at least one recipient roams between respective access points.*

Leung (6,195,705) discloses Mobile IP Mobility Agent Standby Protocol. Leung discloses a home agent and a foreign agent negotiating the conditions of mobile node's attachment to the foreign agent—the conditions in the negotiation of mobile's node attachment to the foreign agent is performed such that Home Agent 8-fig.1 is able to update an internal mobility binding table which specifies the Foreign Agent's IP address is associated with the identification of mobile node 6-fig.1, see column 1, line 64 to column 2, line 44 (corresponding to (1)).

Davidson and Leung are analogous art because they are from a similar problem solving area, viz., avoiding interruption in transmitting IP packets in mobile IP network.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of negotiating, when the mobile node is roaming, between the home and foreign network agents of Leung with Davidson.

The suggestion/motivation for doing so would have been to allow a mobile node to roam between various networks while still maintaining the connection with home network.

Therefore, it would have been obvious to combine Leung with Davidson to obtain the invention as specified in claim 6.

**Regarding claim 22:**

Davidson discloses all the claimed limitations, except (1) *means for transferring membership table information from a first wireless access point to a second wireless access point when the at least one recipient roams between respective access points.*

Leung (6,195,705) discloses Mobile IP Mobility Agent Standby Protocol. Leung discloses a home agent and a foreign agent negotiating the conditions of mobile node's attachment to the foreign agent—the conditions in the negotiation of mobile's node attachment to the foreign agent is performed such that Home Agent 8-fig.1 is able to update an internal mobility binding table which specifies the Foreign Agent's IP address is associated with the identification of mobile node 6-fig.1, see column 1, line 64 to column 2, line 44 (corresponding to (1)).

Davidson and Leung are analogous art because they are from a similar problem solving area, viz., avoiding interruption in transmitting IP packets in mobile IP network.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of negotiating, when the mobile node is roaming, between the home and foreign network agents of Leung with Davidson.

The suggestion/motivation for doing so would have been to allow a mobile node to roam between various networks while still maintaining the connection with home network.

Art Unit: 2665

Therefore, it would have been obvious to combine Leung with Davidson to obtain the invention as specified in claim 6.

7. Claims 10 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson (6,754,197) in view of Huang (US 2002/0046271).

**Regarding claim 10:**

The modified Davidson discloses all the claimed limitations, except (1) *wherein the step of transferring comprises IGMP snooping on associated Ethernet bridges and switches.*

Huang (US 2002/0046271) discloses Single Switch Image for a stack of Switches. Huang discloses that IGMP snooping can be performed independently at each switch node, see 0149 (corresponding to (1)).

The modified Davidson and Huang are analogous art because they are from a similar problem solving area, viz., examine IGMP packet for the group address so that to forward the multicast traffic to only the group requested.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the IGMP's snooping mechanism at the switch of Huang with the modified Davidson.

The suggestion/motivation for doing so would have been to prevent flooding, i.e., broadcasting, multicast traffic to non-requested terminals.

Therefore, it would have been obvious to combine Huang with the modified Davidson to obtain the invention as specified in claim 10.

**Regarding claim 26:**

The modified Davidson discloses all the claimed limitations, except (1) *wherein the means for transferring comprises IGMP snooping on associated Ethernet bridges and switches.*

Huang (US 2002/0046271) discloses Single Switch Image for a stack of Switches. Huang discloses that IGMP snooping can be performed independently at each switch node, see 0149 (corresponding to (1)).

The modified Davidson and Huang are analogous art because they are from a similar problem solving area, viz., examine IGMP packet for the group address so that to forward the multicast traffic to only the group requested.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the IGMP's snooping mechanism at the switch of Huang with the modified Davidson.

The suggestion/motivation for doing so would have been to prevent flooding, i.e., broadcasting, multicast traffic to non-requested terminals.

Therefore, it would have been obvious to combine Huang with the modified Davidson to obtain the invention as specified in claim 10.

8. Claims 12-14 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson (6,754,197) in view of Matsunaga (6,532,233).

**Regarding claim 12:**

Davidson discloses all claimed limitations, except (1) a *step of maintaining the membership table by periodically receiving a membership report from each of the at least one recipients.*

Matsunaga (6,532,233) discloses Multicast Communication Method and Apparatus. In Matsunaga, a router unit maintains an update membership by periodically transmitting membership query messages to all multicast terminals to query continuation of the distribution of the multicast packet. Each of the multicast terminals replies by sending its membership report to indicate its continue distribution or not, see column 1, line 42-column 2, line 6; column 6, lines 56-64 (corresponding to (1)).

Davidson and Matsunaga are analogous art because they are from a similar problem solving area, viz., to transmit multicast packets only to the membership destinations.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of updating membership at router of Matsunaga with Davidson.

The suggestion/motivation for doing so would have been to prevent the leakage of unnecessary multicast traffic.

Therefore, it would have been obvious to combine Matsunaga with Davidson to obtain the invention as specified in claim 12.

**Regarding claim 13:**

Davidson further discloses a transmission device 500 comprising a state table for maintaining an entry for a transmit block status of each destination. The entry comprises a plurality of fields such as TableIndexN field, IndexNValid field, ClearDestMaskN field, see column 2, lines 39-48; column 6, line 13-column 7, line 3; column 8, line 28-column 9, line 2 (corresponding to *wherein the step of maintaining the membership table comprises maintaining an entry comprising a plurality of fields for each of the at least one recipients, wherein one of the fields comprises the predetermined identifier*).

**Regarding claim 14:**

Davidson discloses all the claimed limitations, except (1) *wherein another of the plurality of fields comprises an age field corresponding to a received time of a received time of a membership report and wherein the entry is discarded when a new membership report is not received within a threshold time period.*

Matsunaga discloses a router unit inherently updating membership list by discarding an entry of downstream multicast packet when a new membership is not received within a certain period, wherein the entry includes an expiration time field-fig.4, see column 1, line 43-column 2, line 6 (corresponding to (1)).

Davidson and Matsunaga are analogous art because they are from a similar problem solving area, viz., to transmit multicast packets only to the membership destinations.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of updating membership at router of Matsunaga with Davidson.

The suggestion/motivation for doing so would have been to prevent the leakage of unnecessary multicast traffic and to allow sending a report message without waiting for a query, to speed up the group joining process, and to explicitly send a leave-group message for a route to track down the status of the group membership more quickly.

Therefore, it would have been obvious to combine Matsunaga with Davidson to obtain the invention as specified in claim 14.

**Regarding claim 28:**

Davidson discloses all claimed limitations, except (1) *means for maintaining the membership table by periodically receiving a membership report from each of the at least one recipients.*

Matsunaga (6,532,233) discloses Multicast Communication Method and Apparatus. In Matsunaga, a router unit maintains an update membership by periodically transmitting membership query messages to all multicast terminals to query continuation of the distribution of the multicast packet. Each of the multicast terminals replies by sending its membership report to indicate its continue distribution or not, see column 1, line 42-column 2, line 6; column 6, lines 56-64 (corresponding to (1)).

Davidson and Matsunaga are analogous art because they are from a similar problem solving area, viz., to transmit multicast packets only to the membership destinations.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of updating membership at router of Matsunaga with Davidson.

The suggestion/motivation for doing so would have been to prevent the leakage of unnecessary multicast traffic.

Therefore, it would have been obvious to combine Matsunaga with Davidson to obtain the invention as specified in claim 12.

**Regarding claim 29:**

Davidson further discloses a transmission device 500 comprising a state table for maintaining an entry for a transmit block status of each destination. The entry comprises a plurality of fields such as TableIndexN field, IndexNValid field, ClearDestMaskN field, see column 2, lines 39-48; column 6, line 13-column 7, line 3; column 8, line 28-column 9, line 2 (corresponding to *wherein the means for maintaining the membership table comprises means for maintaining an entry comprising a plurality of fields for each of the at least one recipients, wherein one of the fields comprises the predetermined identifier*).

**Regarding claim 30:**

Davidson discloses all the claimed limitations, except (1) *wherein another of the plurality of fields comprises an age field corresponding to a received time of a received time of a membership report and wherein the entry is discarded when a new membership report is not received within a threshold time period.*

Matsunaga discloses a router unit inherently updating membership list by discarding an entry of downstream multicast packet when a new membership is not received within a certain period, wherein the entry includes an expiration time field-fig.4, see column 1, line 43-column 2, line 6 (corresponding to (1)).

Davidson and Matsunaga are analogous art because they are from a similar problem solving area, viz., to transmit multicast packets only to the membership destinations.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of updating membership at router of Matsunaga with Davidson.

The suggestion/motivation for doing so would have been to prevent the leakage of unnecessary multicast traffic and to allow sending a report message without waiting for a query, to speed up the group joining process, and to explicitly send a leave-group message for a route to track down the status of the group membership more quickly.

Therefore, it would have been obvious to combine Matsunaga with Davidson to obtain the invention as specified in claim 14.

***Allowable Subject Matter***

9. Claims 7-9, 11, 23-25, and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchau Ba Nguyen whose telephone number is 571-272-3148. The examiner can normally be reached on Monday-Friday from 10:00 a.m. to 2:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*PN*  
Phuongchau Ba Nguyen  
Examiner  
Art Unit 2665